

Mineral Industry Surveys

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LEAD IN DECEMBER 2020

Domestic mine production (recoverable) of lead in December was 29,200 metric tons (t). Average daily mine production in December was 942 t, 25% more than that in the previous month and 34% more than that in December 2019. Recoverable lead mine production in 2020 was 297,000 t, 12% more than that in 2019.

Total secondary refined lead production in December was 98,400 t, essentially unchanged from that in the previous month and slightly less than that in December 2019. Secondary refined lead production in 2020 was 1,150,000 t, slightly less than that in 2019 (fig. 1; tables 1, 2).

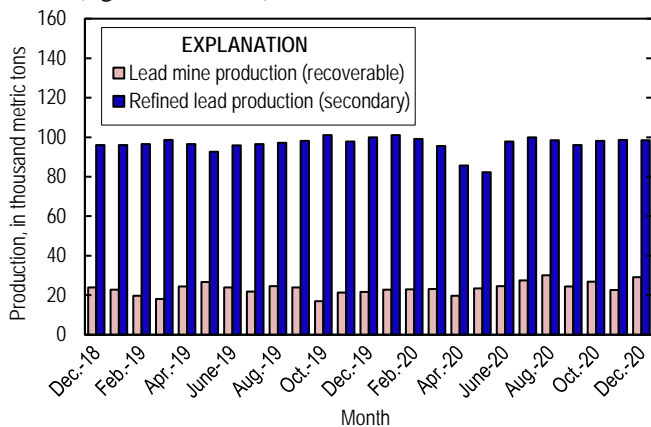


Figure 1. U.S. production of lead from December 2018 through December 2020. Source: U.S. Geological Survey.

The United States is a significant exporter of lead concentrates. U.S. exports of lead in ores and concentrates in 2020 were 265,000 t, slightly more than those in 2019. Leading destinations in 2020 were China (31%), the Republic of Korea (19%), Canada (10%), the Netherlands (10%), and Japan (8%) (table 8).

Prices and Stocks

The average London Metal Exchange, Ltd. (LME) cash price for lead in December was 91.6 cents per pound, 5% more than that in the previous month and 6% more than that in December

2019. The average yearend LME cash price in 2020 was 82.7 cents per pound, 9% less than that in 2019 (table 3).

The S&P Global Platts Metals Week average North American Market price for lead in December 2020 was 100.8 cents per pound, 5% more than that in the previous month and in December 2019. The average yearend North American Market price in 2020 was 91.3 cents per pound, 9% less than that in 2019.

The North American premium to the LME cash price in December 2020 averaged 9.25 cents per pound, unchanged from that in November 2020 and slightly less than that in December 2019 (fig. 2, table 3).

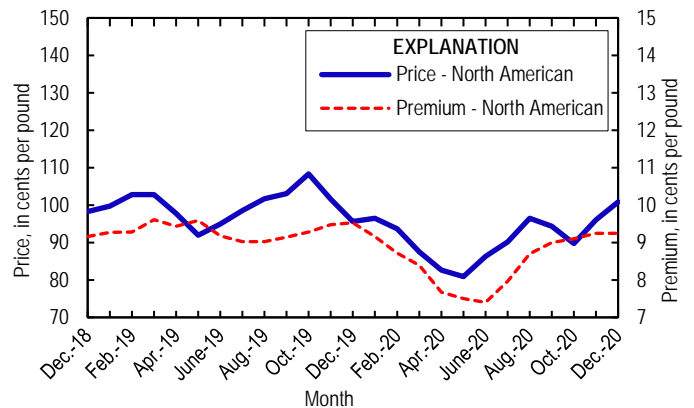


Figure 2. Average monthly North American price and premium for refined lead metal from December 2018 through December 2020. Source: S&P Global Platts Metals Week.

The Platts average U.S. used lead-acid batteries (Midwest) price in December 2020 was 31.7 cents per pound, 11% more than that in November and 12% more than that in December 2019 (table 3). Most secondary lead is recovered from used lead-acid batteries.

Global LME lead stocks at the end of December 2020 were 133,175 t, 18% more than those at the end of November 2020 and more than double from those at the end of December 2019 (table 11).

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TABLE 1
SALIENT LEAD STATISTICS IN THE UNITED STATES¹

(Metric tons, lead content, unless otherwise specified)

	2019 ²		2020	
	January– December	November	December	January– December
Production:				
Mine (recoverable)	266,000	22,700 ^r	29,200	297,000
Secondary refinery, reported by smelters/refineries	1,170,000	98,700 ^r	98,400	1,150,000
Consumption of refined lead, apparent ^{e, 3}	1,640,000	126,000 ^r	121,000	1,520,000
Imports for consumption:				
Ore and concentrate	8	--	--	(4)
Bullion	75	--	--	313
Unwrought	501,000	28,500	24,000	382,000
Exports:				
Ore and concentrate	259,000	28,100	18,800	265,000
Bullion (gross weight)	1,230	497	386	2,460
Unwrought (gross weight)	25,500	1,430	1,480	16,600
S&P Global Platts Metals Week price (cents per pound)	99.91	96.09	100.81	91.25

^eEstimated. ^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

²May include revisions to previously published data.

³Secondary refinery production plus imports for consumption of unwrought lead minus domestic exports of unwrought lead.

⁴Less than ½ unit.

TABLE 2
MINE AND SECONDARY REFINERY PRODUCTION OF LEAD
IN THE UNITED STATES¹

(Metric tons)

Period	Mine		Secondary refinery ^c
	Lead in concentrate	Recoverable	
2019:			
December	22,300	21,700	100,000
January–December	274,000	266,000	1,170,000
2020:			
January	23,500	22,800	101,000 ^r
February	23,500	22,900	99,100 ^r
March	23,700	23,100	95,600 ^r
April	20,300	19,800	85,700 ^r
May	24,200	23,500	82,300 ^r
June	25,300	24,600	97,800 ^r
July	28,300 ^r	27,500 ^r	99,900 ^r
August	30,900 ^r	30,100 ^r	98,400 ^r
September	25,100 ^r	24,400 ^r	96,000 ^r
October	27,600 ^r	26,900 ^r	98,100 ^r
November	23,300 ^r	22,700 ^r	98,700 ^r
December	30,100	29,200	98,400
January–December	306,000	297,000	1,150,000

^cEstimated. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 3
MONTHLY AVERAGE LEAD PRICES

	North American Market ¹ ¢/lb	London Metal Exchange cash		Used lead-acid batteries ² ¢/lb
		¢/lb	\$/t	
2019:				
December	95.65	86.12	1,898.68	35.85
January–December	99.91	90.59	1,997.13	33.12
2020:				
January	96.46	87.30	1,924.69	36.75
February	93.63	84.90	1,871.75	36.44
March	87.50	79.11	1,744.14	34.78
April	82.59	74.91	1,651.53	32.50
May	80.90	73.40	1,618.16	32.25
June	86.32	78.92	1,739.86	32.00
July	90.16	82.20	1,812.15	32.50
August	96.48	87.78	1,935.20	33.16
September	94.34	85.34	1,881.36	33.98
October	89.71	80.61	1,777.07	31.50
November	96.09	86.84	1,914.48	28.63
December	100.81	91.56	2,018.60	31.68
January–December	91.25	82.74	1,824.08	33.01

¹S&P Global Platts Metals Week North American Market price. Reflects the LME lead cash price plus the Platts premium for 99.97% lead.

²S&P Global Platts Metals Week assessment for used lead-acid automotive batteries (50% lead) picked up in U.S. Midwest, suitable for delivery to secondary smelters within 30 days.

Source: S&P Global Platts Metals Week.

TABLE 4
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP IN DECEMBER 2020¹

(Metric tons, gross weight)

Item	Stocks November 30, 2020	Net receipts	Consumption	Stocks December 31, 2020
Battery-lead	W	80,800	79,100	W
Other ²	W	5,920	5,910	W
Total	7,660 ^r	86,800	85,000	9,400
Percent change from preceding month ³	XX	10.3	4.5	22.7

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes soft lead, solder, drosses and residues, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap.

³Based on unrounded data; preceding monthly data may have been revised.

TABLE 5
LEAD, TIN, AND ANTIMONY RECOVERED FROM
LEAD-BASE SCRAP IN DECEMBER 2020¹

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	81,800	--	--
Remelt lead	W	--	--
Antimonial lead	14,700	W	W
Other ²	W	W	--
Total lead-base	98,400	181	W

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 6
U.S. APPARENT CONSUMPTION OF LEAD¹

(Metric tons)

Period	Production	Imports ^{2,3}	Exports ^{2,3}	Apparent consumption ⁴
2019: ^P				
December	100,000	40,200	805	140,000
January–December	1,170,000	501,000	25,500	1,640,000
2020:				
January	101,000 ^r	42,000	1,580	141,000
February	99,100 ^r	26,400	1,290	124,000
March	95,600 ^r	33,400	1,460	128,000 ^r
April	85,700 ^r	41,100	1,290	126,000 ^r
May	82,300 ^r	27,300	909	109,000 ^r
June	97,800 ^r	34,800	1,370	131,000
July	99,900 ^r	27,400	1,700	126,000 ^r
August	98,400 ^r	23,900	1,430	121,000
September	96,000 ^r	24,300	1,420	119,000
October	98,100 ^r	49,300	1,260	146,000
November	98,700 ^r	28,500	1,430	126,000 ^r
December	98,400	24,000	1,480	121,000
January–December	1,150,000	382,000	16,600	1,520,000

^PPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Import and export data are for Harmonized Tariff Schedule of the United States (HTS) codes 7801.10.0000, 7801.91.0000, 7801.99.9030, 7801.99.9050.

³Source: U.S. Census Bureau.

⁴Smelter production plus imports for consumption minus domestic exports.

TABLE 7
U.S. EXPORTS OF LEAD, BY CLASS¹

(Metric tons, gross weight, unless otherwise specified)

Class	2019 ²		2020	
	January– December	November	December	January– December
Ores and concentrate (lead content)	259,000	28,100	18,800	265,000
Bullion	1,230	497	386	2,460
Unwrought:				
Refined lead	9,450	80	40	642
Refined lead containing antimony as the principal alloying element	651	34	45	534
Lead alloys	13,700	1,310	1,210	14,300
Other	1,620	12	180	1,140
Total	25,500	1,430	1,480	16,600
Wrought:				
Bars, rods, profiles, and wire	615	100	36	559
Pipes and tubes, including fittings	167	⁽³⁾	--	87
Plates, sheets, strip, foil	3,460	234	517	2,760
Other	2,360	194	138	2,360
Total	6,600	528	691	5,770
Powders and flakes	297	28	25	203
Tetraethyl lead and tetramethyl lead	507	9	4	145
Waste and scrap:				
Spent lead-acid storage batteries for starting engines (units)	27,300,000	2,630,000	2,500,000	27,500,000
Lead waste and scrap obtained from lead-acid storage batteries	--	--	--	--
Other lead waste and scrap	39,100	3,210	2,690	46,900

-- Zero.

¹Data are rounded to more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
U.S. EXPORTS OF LEAD ORES AND CONCENTRATES, BY COUNTRY OR LOCALITY¹

(Metric tons, lead content)

Country or locality	2019 ²		2020	
	January– December	November	December	January– December
Australia	--	--	--	15,700
Canada	52,400	2,370	3,890	27,500
China	62,300	16,100	3,640	82,600
Dominican Republic	34	--	--	4
Germany	--	--	--	8,060
Indonesia	5	20	--	20
Italy	23,400	--	--	16,000
Japan	25,100	5,690	--	20,800
Korea, Republic of	51,300	3,870	3,570	49,900
Laos	11	--	--	--
Mexico	24,700	20	7,550	15,800
Netherlands	15,000	--	--	27,200
Peru	--	--	106	106
Thailand	3,390	--	--	1,190
Vietnam	1,760	--	--	30
Total	259,000	28,100	18,800	265,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

Source: U.S. Census Bureau.

TABLE 9
U.S. IMPORTS FOR CONSUMPTION OF LEAD, BY CLASS¹

(Metric tons, gross weight, unless otherwise specified)

Class	2019 ²		2020	
	January– December	November	December	January– December
Ores and concentrate (lead content)	8	--	--	(3)
Bullion (lead content)	75	--	--	313
Unwrought:				
Refined lead	406,000	22,200	17,100	314,000
Refined lead containing antimony as the principal alloying element (lead content)	27,000	2,410	2,130	22,800
Lead alloys (lead content)	23,200	2,070	1,980	18,600
Other (lead content)	44,000	1,840	2,780	27,300
Total	501,000	28,500	24,000	382,000
Wrought:				
Bars, rods, profiles, and wire	3,420	845	249	4,810
Pipes and tubes, including fittings	77	--	4	100
Plates, sheets, strip, foil	1,760	69	110	1,350
Other	2,770	162	229	2,050
Total	8,020	1,080	591	8,310
Powders and flakes	315	--	(3)	183
Tetraethyl lead and tetramethyl lead	139	11	11	278
Waste and scrap:				
Spent lead-acid storage batteries for starting engines (units)	528,000	44,100	1,730,000	5,830,000 ⁴
Lead waste and scrap obtained from lead-acid storage batteries (lead content)	2,320	207	254	2,120
Other lead waste and scrap (lead content)	2,100	300	233	2,360

-- Zero.

¹Data are rounded to more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Less than ½ unit.

⁴Referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 10
U.S. IMPORTS FOR CONSUMPTION OF UNWROUGHT LEAD, BY COUNTRY OR LOCALITY¹

(Metric tons, lead content)

Material and country or locality of origin	2019 ²	2020		
	January– December	November	December	January– December
Refined lead:				
Argentina	4,300	--	--	1,800
Australia	--	4,720	--	15,900
Brazil	9,920	167	142	15,500
Burma	1,500	100	--	750
Canada	159,000	9,590	10,100	113,000
China	101	--	--	--
Colombia	801	--	--	900
Dominican Republic	50	52	--	130
Ecuador	19,800	401	202	7,190
Germany	50	--	--	--
Ghana	--	397	790	1,610
Hong Kong	100	--	--	--
India	4,090	--	--	3,760
Indonesia	--	--	--	76
Israel	2,200	--	--	2,050
Japan	--	--	--	299
Kazakhstan	17,800	--	219	13,400
Korea, Republic of	76,000	--	--	48,800
Mexico	96,700	5,320	5,310	67,000
Nigeria	994	1,180	50	7,140
Panama	400	--	--	--
Peru	3,030	250	50	1,900
Russia	6,070	--	--	11,200
South Africa	20	--	20	20
Sri Lanka	--	--	--	200
Thailand	1,250	--	99	291
United Kingdom	404	--	98	590
Venezuela	2,080	--	--	245
Total	406,000	22,200	17,100	314,000
Other unwrought lead:³				
Argentina	2,080	--	--	--
Australia	--	--	47	47
Bolivia	183	--	--	--
Brazil	276	--	--	208
Canada	86,800	6,220	6,280	63,600
Chile	--	--	--	299
China	2	--	--	--
Colombia	--	20	--	20
Costa Rica	19	--	--	--
Denmark	--	--	--	(4)
Dominican Republic	--	--	153	1,070
Ecuador	378	--	--	318
France	--	--	13	43
Germany	1	--	--	--
Ghana	--	--	--	198
India	321	--	68	644
Korea, Republic of	14	--	--	10
Mexico	2,700	48	63	1,230
Panama	--	--	149	149
Paraguay	49	--	--	--
Peru	221	--	--	--
Russia	(4)	(4)	4	4
Sweden	11	--	--	--
Taiwan	(4)	--	--	--

See footnotes at end of table.

TABLE 10—Continued
 U.S. IMPORTS FOR CONSUMPTION OF UNWROUGHT LEAD, BY COUNTRY OR LOCALITY¹

(Metric tons, lead content)

Material and country or locality of origin	2019 ²		2020	
	January– December	November	December	January– December
Other unwrought lead—Continued: ³				
United Kingdom	1,040	23	90	615
Venezuela	185	--	26	211
Total	94,300	6,320	6,890	68,700
Grand total	501,000	28,500	24,000	382,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include revisions to previously published data.

³Includes the lead content (Quantity 2) of Harmonized Tariff Schedule of the United States (HTS) codes 7801.91.0000, 7801.99.9030, 7801.99.9050. Excludes bullion.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 11
LONDON METAL EXCHANGE (LME) STOCKS OF LEAD, END OF PERIOD

(Metric tons)

Period	United States	Asia	Europe	Total
2019:				
December	--	26,050	40,150	66,200
2020:				
January	--	26,000	40,800	66,800
February	--	25,750	42,350	68,100
March	--	26,250	44,650	70,900
April	3,725	26,100	43,825	73,650
May	5,875	25,625	44,325	75,825
June	5,875	24,625	36,000	66,500
July	7,725	28,450	81,975	118,150
August	7,250	33,775	83,875	124,900
September	6,825	34,350	95,825	137,000
October	6,325	33,600	84,475	124,400
November	4,425	33,200	75,075	112,700
December	1,550	35,125	96,500	133,175

-- Zero.

Source: London Metal Exchange, Ltd.